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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/765,944 | 01/29/2004 | Klaus Gunter Engel | 8989-032 | 5772 |

1059 7590 08/09/2005

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EXAMINER

ROJAS, BERNARD

ART UNIT PAPER NUMBER

2832

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,944

Applicant(s)

ENGEL, KLAUS GUNTER

Examiner

Bernard Rojas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06232004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what structure applicant is defining in claim 2 line 1 states "wherein each end also includes..." For examination purposes this will be interpreted as "*wherein each end cap also includes...*"

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: how the maximum radius regions and the minimum radius regions are dimensioned to match the torque of the actuator are related to a microwave T-switch..

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. [US 3,959,672] in view of Honsinger et al. [US 4,388,545].

Claim 1, Walker et al. discloses a hybrid switch actuator having positions that are stable in the absence of current and in which displacement occurs between an initial position and a target position under the action of a current, for operation of a microwave switch, said actuator comprising; a stator having six pole shoes, each pair of opposed pole shoes being associated with a common exciting coil [figure 1, col. 1 lines 40-51]; and such that when two diametrically opposed stator pole shoes having a first polarity are excited through their associated common exciting coil, said stator pole shoes attract two diametrically opposed rotor poles having an opposite polarity to said first polarity and repel the remaining two rotor poles such that each rotor pole associated with a maximum radius region can be precisely aligned with a stator pole associated with a stator pole shoe [col. 1 lines 40-51, alternating the polarity will make the rotor spin]..

Honsinger et al. discloses a rotor package rotatable along a rotation axis and adapted to be positioned within said stator and having two pairs of rotor poles magnetized transversely in alternate directions, said rotor package including a permanent magnet ring [3] magnetized along the rotation axis and two end caps [11,13] adapted to be engaged around said permanent magnet ring, each end cap having two maximum radius regions that each correspond to the area of each of the stator pole shoes [figure 1, col. 2 lines 27-28].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the easily manufactured rotor of Honsinger et al. in the stator of Walker et al. in order to reduce the cost of the rotor [col. 2 lines 10-30].

Claim 2, Honsinger et al. discloses the actuator of claim 1, wherein each end also includes four reduced radius regions, each reduced radius region having a radius that is less than the radius of the maximum radius region, each maximum radius region having two of said four reduced radius regions positioned adjacent therein [figure 1].

Claim 3, Honsinger et al. discloses the claimed invention except for the distance between the end caps. It would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the distance between the end caps in order to adjust the magnetic flux line from the permanent magnet depending on the size of the stator in order to maximize the rotor's efficiency. Since applicant has not disclosed that a distance of at least 1 .5 mm solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any flux maximizing distance.

Claim 4, Walker et al. discloses that the rotor is adapted to move from any initial position to any target position by moving 60 degrees [figure 1].

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bernard Rose
Br


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